

ABSTRACT

A sandwich structure does not permit the permeation of water and a sandwich structure repairing method is capable of easily repairing the sandwich structure. A sandwich structure (1) includes a core (4) formed of a closed-cell foam plastic material, and surface plates (2, 3) formed of a fiber-reinforced composite material containing hydrophobic inorganic fibers as reinforcing fibers and bonded to the opposite surfaces of the core (4). Water is unable to permeate the sandwich structure. When the outer surface plate (2) of the sandwich structure (1) is damaged, a damaged portion of the outer surface plate (2) is removed to form a circular opening (10) in the outer surface plate (2), a portion of the core (4) in the vicinity of the circular opening (10) is removed by shot blasting work, a support plate (16) provided with radial arms (18) is fastened to the inner surface of the outer surface plate (2) with rivets (25) at a position corresponding to the circular opening (10), a circular cover plate (40) is fitted in the opening (10) so as to be seated on the support plate (16) and is fastened to the support plate (16) with rivets (25). A cavity formed by removing the portion of the core (4) is filled up with a filling material (43).